

WINTER BARLEY 2018

| AGRONOMIC & QUALITY CHARACTERISTICS* | RECOMMENDED | | | | | | PROVISIONALLY RECOMMENDED |
|--------------------------------------|-------------|--------------|-------------|-------------|-------------|-------------|---------------------------|
| | KWS CASSIA | KWS INFINITY | KWS TOWER | LEIBNIZ | QUADRA | VOLUME | KWS KOSMOS |
| Relative Yield ♣ | 97 | 101 | 100 | 103 | 108 | 107 | 107 |
| Varietal Type | 2R | 2R | 2R | 6R | 6R (H) | 6R (H) | 6R |
| Straw Height (cm) | 91.9 | 88.0 | 91.0 | 111.1 | 104.0 | 105.5 | 106.8 |
| Resistance to Lodging | 7 | 7 | 7 | 6 | 7 | 6 | (6) |
| Straw Breakdown | 6 | 6 | 5 | 4 | 5 | 4 | (4) |
| Earliness of Ripening | 6 | 6 | 6 | 6 | 7 | 7 | (7) |
| Resistance to: | | | | | | | |
| Mildew | 5 | 5 | 6 | 6 | 7 | 6 | (8) |
| <i>Rhynchosporium</i> | 4 | 7 | 6 | 7 | 7 | 7 | (7) |
| Brown Rust | 7 | 7 | 6 | 3 | 6 | 6 | (7) |
| Net Blotch | 7 | 7 | 5 | 7 | 7 | 7 | (7) |
| Grain quality: | | | | | | | |
| 1000 grain weight (g) | 57.5 | 58.1 | 59.6 | 51.1 | 47.9 | 44.3 | 51.3 |
| Hectolitre weight (kg/hl) | 69.8 | 67.6 | 66.9 | 65.6 | 67.7 | 66.4 | 65.6 |
| Year First Listed | 2011 | 2016 | 2015 | 2010 | 2016 | 2012 | 2018 |

* Based on trial results from **2015, 2016 and 2017**

♣ Yields are expressed as a percentage of the mean of **Leibniz, KWS Cassia & KWS Tower** (100 = 9.98 t/ha @ 15% moisture content)

NOTES ON VARIETIES

RECOMMENDED

KWS CASSIA:

A moderately early maturing British feed variety with high yield potential. Short straw with good resistance to lodging and moderate resistance to straw breakdown. Moderately susceptible to mildew and susceptible to *Rhynchosporium*. Good resistance to brown rust and net blotch. Very good grain quality with a very good hectolitre weight.

- Cross: (Eden X Carat) X Saffron
- Breeder/Agent: KWS UK, Goldcrop Ltd

KWS INFINITY:

A moderately early maturing British feed variety with high yield potential. Short straw with good resistance to lodging and moderate resistance to straw breakdown. Moderately susceptible to mildew and good resistance to *Rhynchosporium*, brown rust and net blotch. Large grain size with good grain quality.

- Cross: KWS Cassia X Retriever
- Breeder/Agent: KWS UK, Goldcrop Ltd

KWS TOWER:

A moderately early maturing British feed variety with high yield potential. Short straw with good resistance to lodging and moderate susceptibility to straw breakdown. Moderately susceptible to net blotch and moderately resistant to *Rhynchosporium*, brown rust and mildew. Large grain size with good grain quality.

- Cross: Saffron X Retriever
- Breeder/Agent: KWS UK, Goldcrop Ltd

LEIBNIZ:

A conventional six-row German feed variety with high yield potential. Long straw with moderate resistance to lodging. Susceptible to straw breakdown. Moderately resistant to mildew with good resistance to *Rhynchosporium* and net blotch. Very susceptible to brown rust. Moderate grain quality with a reasonable hectolitre weight.

- Cross: LP 6-936 X BCym 5
- Breeder/Agent: KWS Lochow, Seed Technology Ltd.

QUADRA:

An early maturing hybrid six-row British feed variety with very high yield potential. Long straw with good resistance to lodging. Moderately susceptible to straw breakdown. Moderately resistant to brown rust. Good resistance to mildew, *Rhynchosporium* and net blotch. Small grain size with a good hectolitre weight.

- Cross: F1 Hybrid
- Breeder/Agent: Syngenta Seeds Ltd, Seed Technology Ltd.

VOLUME:

An early maturing hybrid six-row British feed variety with very high yield potential. Long straw with moderate resistance to lodging. Susceptible to straw breakdown. Moderately resistant to mildew and brown rust. Good resistance to *Rhynchosporium* and net blotch. Small grain size with a good hectolitre weight.

- Cross: F1 Hybrid
- Breeder/Agent: Syngenta Seeds Ltd, Seed Technology Ltd.

PROVISIONALLY RECOMMENDED

KWS KOSMOS:

An early maturing German six-row conventional variety with very high yield potential. Long straw with moderate resistance to lodging. Susceptible to straw breakdown. Very good resistance to mildew and good resistance to brown rust, *Rhynchosporium* and net blotch. Moderate grain quality with a reasonable hectolitre weight.

- Cross: G1530/06 X KWS Meridian
- Breeder/Agent: KWS Lochow, Seed Technology Ltd.

WINTER WHEAT 2018

| AGRONOMIC & QUALITY CHARACTERISTICS* | RECOMMENDED | | | | | | PROVISIONALLY RECOMMENDED | | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------|-------------|-------------|
| | AVATAR | COSTELLO | GARRUS | JB DIEGO | KWS LILI | KWS LUMOS | BENNINGTON | ROCKEFELLER | TORP |
| Relative Yield ♦ | 100 | 99 | 101 | 100 | 99 | 98 | 102 | 98 | 103 |
| Straw Height (cm) | 83.4 | 73.9 | 77.1 | 80.7 | 73.1 | 75.7 | 85.5 | 93.9 | 82.8 |
| Resistance to lodging | 7 | 8 | 7 | 6 | 8 | 8 | (7) | 5 | (7) |
| Straw breakdown | 7 | 7 | 6 | 7 | 7 | 7 | (8) | 7 | (6) |
| Earliness of ripening | 5 | 6 | 5 | 6 | 4 | 7 | (6) | 4 | (5) |
| Resistance to: | | | | | | | | | |
| Mildew | 5 | 8 | 8 | 6 | 8 | 7 | (6) | 8 | (5) |
| Septoria spp. | 4 | 5 | 6 | 5 | 6 | 5 | (6) | 6 | (7) |
| Yellow rust | 7 | 8 | 4 | 5 | 6 | 7 | (6) | 8 | (6) |
| Fusarium ear blight | 6 | 7 | 6 | 6 | 4 | 5 | (7) | 7 | (4) |
| Sprouting | 4 | 8 | 4 | 7 | 6 | 7 | (5) | 7 | (6) |
| Quality: | | | | | | | | | |
| Grain Protein % (15%MC) | 9.5 | 10.2 | 9.5 | 10.0 | 9.6 | 10.1 | 10.2 | 9.7 | 9.7 |
| Hagberg Falling No. ♠ | 207 | 308 | 114 | 285 | 272 | 302 | 214 | 289 | 211 |
| 1000 grain weight (g) | 50.7 | 49.5 | 48.8 | 51.7 | 46.9 | 46.7 | 50.7 | 49.4 | 49.8 |
| Hectolitre weight (kg/hl) | 78.0 | 80.2 | 76.2 | 77.5 | 76.9 | 78.5 | 77.2 | 77.8 | 74.7 |
| Market + | F | F | F | F | Br | Br | F | F | F |
| Year First Listed | 2013 | 2017 | 2017 | 2010 | 2016 | 2014 | 2018 | 2017 | 2018 |

* Based on trial results from **2015, 2016** and **2017**.

♦ Yields are expressed as a percentage of the mean **JB Diego & Avatar** (100 = 12.37t/ha @ 15% moisture content).

♠ Based on results from harvests 2015 and 2016.

+ **Br** - Bread-making potential. **Bi** - Biscuit making potential. **F** - Feed quality.

() Limited Data.

NOTES ON VARIETIES

RECOMMENDED

- AVATAR:** A high yielding British variety with a moderately long straw and good resistance to lodging and straw breakdown. Moderately late maturing. Moderately susceptible to mildew and susceptible to *Septoria tritici*. Susceptible to sprouting. Grain of feed quality with good hectolitre weight.
- Parentage: Istabraq X Lion
 - Breeder/Irl. Agent: Limagrain UK, Goldcrop Ltd.
- COSTELLO:** A British variety with short straw, very good resistance to lodging and good resistance to straw breakdown. Very good resistance to mildew and yellow rust, good resistance to fusarium and moderately susceptible to *Septoria tritici*. Very good resistance to sprouting. Very good hectolitre weight.
- Parentage: CPBTW151 X CPBT W134
 - Breeder/Irl. Agent: KWS UK, Goldcrop Ltd.
- GARRUS:** A British bred variety with moderately short straw, good resistance to lodging and moderate resistance to straw breakdown. Very good resistance to Mildew, moderate resistance to *Septoria tritici* and fusarium. Susceptible to yellow rust and sprouting.
- Parentage: Lear X Oakley
 - Breeder/Irl. Agent: Limagrain UK, Seed Technology Ltd.
- JB DIEGO:** A German variety with moderately short straw, moderate resistance to lodging and good resistance to straw breakdown. Moderately resistant to mildew and fusarium. Moderately susceptible to *Septoria tritici* and yellow rust. Good resistance to sprouting. Grain of feed quality with high thousand grain weight and good hectolitre weight.
- Parentage: 3351b1 X Stru2374
 - Breeder/Irl. Agent: Breun, Germinal Ireland.
- KWS LILI:** A late maturing British bred variety with short straw. Very good resistance to lodging and good resistance to straw breakdown. Very good resistance to mildew and moderate resistance to *Septoria tritici* and yellow rust. Susceptible to fusarium. Moderate resistance to sprouting. Grain of bread quality.
- Parentage: KWS Horizon X CPBT W134
 - Breeder/Irl. Agent: KWS UK, Goldcrop Ltd.

KWS LUMOS: A British bred variety with moderately short straw, very good resistance to lodging and good resistance to straw breakdown. Good resistance to mildew and yellow rust with moderate susceptibility to fusarium and *Septoria tritici*. Good resistance to sprouting. Very good grain quality, with a low thousand grain weight and a very good hectolitre weight.

- Parentage: Cordiale X Dover
- Breeder/Irl. Agent: KWS UK, Goldcrop Ltd.

PROVISIONALLY RECOMMENDED

BENNINGTON: A high yielding British variety with moderately long straw, good resistance to lodging and very good resistance to straw breakdown. Moderate resistance to mildew, *Septoria tritici* and yellow rust. Good resistance to fusarium. Moderately susceptible to sprouting.

- Parentage: Alchemy X Battalion
- Breeder/Irl. Agent: Elsoms UK, Germinal Ireland.

ROCKEFELLER: A late maturing Danish variety. Very tall with moderate susceptibility to lodging and good resistance to straw breakdown. Very good resistance to mildew and yellow rust with moderate resistance to *Septoria tritici*. Good resistance to fusarium and sprouting.

- Parentage:Skalmeje X Kredo
- Breeder/Irl. Agent: Sejet DK, Goldcrop Ltd.

TORP: A very high yielding, late maturing Danish variety. Good resistance to lodging and moderate resistance to straw breakdown. Good resistance to *Septoria tritici*, moderate resistance to yellow rust and moderately susceptible to mildew. Susceptible to fusarium and moderately resistant to sprouting. Moderate grain quality with a low hectolitre weight.

- Parentage: Ambition X Symbol
- Breeder/Irl. Agent: Nordic Seeds DK, Drummonds Ltd.

WINTER OATS 2018

| AGRONOMIC & QUALITY CHARACTERISTICS* | RECOMMENDED | | PROVISIONALLY RECOMMENDED |
|--------------------------------------|-------------|-------------|---------------------------|
| | BARRA | HUSKY | KEELY |
| Relative Yield ♦ | 97 | 103 | 100 |
| Straw height (cm) | 124.2 | 118.0 | 119.5 |
| Resistance to lodging | 4 | 7 | (5) |
| Straw breakdown | 4 | 5 | (4) |
| Earliness of ripening | 5 | 8 | (8) |
| Winter hardiness** | 3 | 5 | - |
| Resistance to: | | | |
| Mildew | 3 | 6 | (5) |
| Crown rust | 4 | 4 | (4) |
| Grain quality: | | | |
| Kernel content (%) | 72.8 | 72.0 | 72.6 |
| 1000 grain weight (g) | 39.1 | 39.3 | 38.7 |
| Hectolitre weight (kg/hl) | 58.3 | 57.0 | 57.8 |
| Year First Listed | 1986 | 2010 | 2018 |

* Based on trial results from 2015, 2016 and 2017.

♦ Yields are expressed as a percentage of the mean of **Barra** and **Husky** (100 = 9.57 t/ha @ 15% moisture content).

- No data.

() Limited Data.

** Winter hardiness scores for Barra & Husky are based on robust data from Spring 2011.

Barra, Husky and Keely are Spring type varieties sown in winter. Prolonged severe frost or harsh winds can seriously damage spring varieties sown in winter and may cause drastic reduction in yield or even crop failure.

NOTES ON VARIETIES

RECOMMENDED

BARRA: A moderate yielding Swedish variety. Moderately late maturing. Susceptible to lodging and straw breakdown. A spring type variety with very good grain quality. Very susceptible to mildew and susceptible to crown rust.

- Parentage: Selma X KM1 MS
- Breeder/Agent: Svalöf Weibull AB, Goldcrop Ltd.

HUSKY: An early maturing German variety with high yield potential. Short straw with good resistance to lodging and moderate susceptibility to straw breakdown. A spring type variety with very good grain quality. Moderately resistant to mildew and susceptible to crown rust.

- Parentage: CPBT SOI X Freddy
- Breeder/Agent: Nordsaat, Seed Technology Ltd.

PROVISIONALLY RECOMMENDED

KEELY: An early maturing German variety. Short straw with moderate susceptibility to lodging and susceptible to straw breakdown. A spring type variety with very good grain quality. Moderately susceptible to mildew and susceptible to crown rust.

- Parentage: 06/114 X Scorpion
- Breeder/Agent: Nordsaat, Goldcrop Ltd.